

REMARKS

Applicants appreciate the Examiner's thorough consideration provided the present application. Claims 9, 10 and 12-26 are now present in the application. Claims 1-8 have been finally withdrawn from consideration in the previous reply, and are hereby cancelled. Claims 9 and 12-17, 20 and 21 have been amended. Claim 26 has been added. Claim 11 has also been cancelled. Claim 9 is independent. Reconsideration of this application, as amended, is respectfully requested.

Claim Rejections Under 35 U.S.C. §112

Claims 9-25 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. This rejection is respectfully traversed.

In view of the foregoing amendments, it is respectfully submitted that this rejection has been addressed. Accordingly, all pending claims are now definite and clear. Reconsideration and withdrawal of the rejection under 35 U.S.C. § 112, second paragraph, are therefore respectfully requested.

Claim Rejections Under 35 U.S.C. § 103

Claims 9, 17, 18, 22 and 25 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Pei, U.S. Patent No. 5,682,043, in view of Wright, U.S. Patent No. 3,661,081 and Spencer, U.S. Patent No. 5,827,577; Ireton, U.S. Patent No. 4,611,539 was cited as evidence. Claim 10 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Pei in view of Wright and Spencer, and further in view of Himeshima, U.S. Patent No. 6,592,933. Claims 11-16 and 20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Pei in view of Wright, Spencer, and Himeshima, and further in view of Shinoda, U.S. Patent No. 5,674,553. Claim 19 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Pei in view of Wright and Spencer, and further in view of Mourrellone, U.S. Patent No. 4,542,693. Claim 21 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Pei in view of Wright, Spencer, Himeshima, and Shinoda, and further in view of Nagayama, U.S. Patent No. 5,701,055. Claims 23 and 24 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Pei in view of Wright and Spencer, and further in view of Watanabe, U.S. Patent No. 5,270,846. These rejections are respectfully traversed.

Complete discussions of the Examiner's rejections are set forth in the Office Action, and are not being repeated here.

In light of the foregoing amendments to the claims, Applicants respectfully submit that these rejections have been obviated and/or rendered moot. While not conceding to the Examiner's rejections, but merely to expedite prosecution, as the Examiner will note, independent claim 9 has been amended to recite a combination of steps including "printing the electroluminescent material on the lands from the molding plate onto the pixel electrodes between the barrier ribs by rotating the molding roller, thereby patterning the electroluminescent display during said step of printing". Applicants respectfully submit that the combination of steps as set forth in amended independent claim 9 is not disclosed or suggested by the references relied on by the Examiner.

Pei discloses the formation of an electrochemical light emitting device, which includes a composite material in contact with two electrodes (see Abstract). In particular, Pei teaches the composite material may be processed into substantially uniform layers using established techniques such as spin coating, roll coating, and flexographic printing (see col. 10, lines 14-28).

Pei further teaches that to construct displays of higher information content, electrochemical light emitting devices may be fabricated as arrays of individually addressable electrochemical light emitting devices; such arrays may readily be produced by suitable patterning of either the electrodes or of the layer of composite material (see col. 10, lines 39-44).

In other words, Pei teaches using the established techniques including flexographic printing to print the composite material into a substantially uniform layer and then, **after the printing step, patterning** the uniform layer of the composite material to fabricate the arrays of electrochemical light emitting devices. Therefore, Pei fails to teach “patterning the electroluminescent display during said step of printing” as recited in claim 9 because Pei merely teaches patterning the layer of composite material **after** flexographic printing the composite material into a uniform layer. Although the Examiner alleged that Pei contemplates patterning the electroluminescent layers because Pei, in col. 7, lines 12-21, teaches a multi-color display, Pei still fails to teach “patterning the electroluminescent display during said step of printing” for the same reasons described above.

The Examiner correctly indicated that Pei fails to teach printing the composite material onto pixels between barrier ribs. Therefore, Pei fails to teach “printing the electroluminescent material on the lands from the molding plate onto the pixel electrodes between the barrier ribs by rotating the molding roller” as recited in claim 9. Although the Examiner alleged that Pei teaches that different materials may be printed in different locations in col. 7, lines 12-21, Applicants respectfully disagree. Pei merely teaches the electrochemical light emitting device may comprise more than one spatially separated region, each region further comprising different semiconductors for different colors

(col. 7, lines 12-21). Pei at best teaches forming a device with spatially separated regions comprising different semiconductors for different colors, which merely means flexographic printing and subsequently patterning the electroluminescent material based on Pei's disclosure in col. 10, lines 14-28 and 39-44. Pei does not teach printing different materials in different locations. Applicants respectfully submit that to construe Pei's description in col. 7, lines 12-21 to be printing different materials in different locations is too broad and unfair to Applicants.

With regard to Himeshima and Shinoda, the Examiner alleged Himeshima teaches spacers (referred to as barrier ribs) and Shinoda teaches barrier ribs are between pixels.

Himeshima teaches the emitting layer 6 is formed by vapor-depositing the luminescent material 12 in between the spacers 4 with the assistance of the shadow mask 31 (see FIG. 19; col. 10, lines 1-24). Therefore, Himeshima also fails to teach "printing the electroluminescent material on the lands from the molding plate onto the pixel electrodes between the barrier ribs **by rotating the molding roller**" as recited in claim 9.

Shinoda teaches using a screen mask with openings for screen printing the phosphor paste 28a in between the barriers 29 (see FIGs. 22A-C; col. 19, lines 66-67; col. 20, lines 1-12). Therefore, Shinoda also fails to teach "printing the electroluminescent material on the lands from the molding plate onto the

pixel electrodes between the barrier ribs **by rotating the molding roller**” as recited in claim 9.

In addition, Applicants respectfully submit that the Examiner failed to establish a *prima facie* case of obviousness.

First, there is no suggestion or motivation, either in Pei, Himeshima or Shinoda themselves or in the knowledge generally available to one of ordinary skill in the art, to combine these references. The Examiner alleged that it is notoriously well known in the art of electroluminescent devices to use barrier ribs between pixels. However, even if it were well known to use barrier ribs between pixels, it does not mean that the step of “printing the electroluminescent material onto the pixels electrodes between the barrier ribs by rotating the molding roller” is well known. Applicants seasonably traverse this unsupported assertion by the Examiner, and that if the above step were well known, Applicants request that the Examiner provide a prior art reference teaching this step. In this case, the Examiner failed to provide any prior art showing printing the electroluminescent material onto the pixels electrodes between the barrier ribs by rotating the molding roller. As mentioned, Pei only teaches flexographic printing and subsequent patterning. On the other hands, Himeshima and Shinoda merely teach vapor-depositing and screen-printing methods to form the electroluminescent material between the barrier ribs.

Since Himeshima and Shinoda are not related to the flexographic printing, there is no suggestion or motivation to combine these references.

Second, the Examiner merely cited Himeshima and Shinoda, both of which merely teach vapor-depositing and screen-printing methods to form the electroluminescent material between the barrier ribs. Himeshima and Shinoda fail to teach printing by rotating the molding roller. Accordingly, none of Pei, Himeshima, and Shinoda show the reasonable expectation of success to modify Pei's flexographic printing into Himeshima and Shinoda's barrier ribs.

Since there is neither suggestion or motivation to combine nor reasonable expectation of success, it would be impermissible hindsight based on Applicant's own disclosure to reconstruct the claim by incorporating these references directed to respective elements.

With regard to the Examiner's reliance on Wright, Spencer, Nagayama, Mourrellone, and Watanabe, these references have only been relied on for their teachings of convex and concave portions, the location of the roller, the thickness of the material on the roller, the level surface of the inks, etc. These references also fail to disclose the above combination of elements as set forth in amended independent claim 9. Accordingly, these references fail to cure the deficiencies of Pei.

Accordingly, none of the references utilized by the Examiner individually or in combination teach or suggest the limitations of amended independent

claim 9. Therefore, Applicants respectfully submit that amended independent claim 9 clearly defines over the teachings of these references utilized by the Examiner.

In addition, claims 10 and 12-25 depend, either directly or indirectly, from independent claim 9, and are therefore allowable based on their respective dependence from independent claim 9, which is believed to be allowable.

In view of the above remarks, Applicants respectfully submit that claims 9, 10 and 12-25 clearly define the present invention over the references relied on by the Examiner. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103 are respectfully requested.

Additional Claim

Claim 26 has been added for the Examiner's consideration. Support for the subject matter of claim 26 can be found in FIG. 5 and paragraph beginning on page 6, line 15. Applicants respectfully submit that claim 26 depends directly from amended independent claim 9, and is therefore allowable based on its dependence from amended independent claim 9, which is believed to be allowable. Favorable consideration and allowance of claim 26 are respectfully requested.

Additional Cited References

Since the remaining patents cited by the Examiner have not been utilized to reject the claims, but rather to merely show the state of the art, no further comments are necessary with respect thereto.

CONCLUSION

All the stated grounds of rejection have been properly traversed and/or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently pending rejections and that they be withdrawn.

It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

In the event there are any matters remaining in this application, the Examiner is invited to contact the undersigned at (703) 205-8000 in the Washington, D.C. area.

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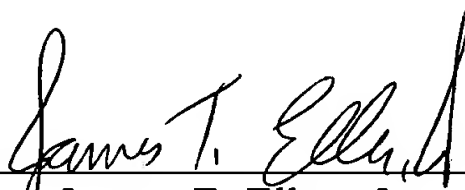
If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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